ABSTRACT OF THE DISCLOSURE

An exhaust gas purifying apparatus and method for an internal combustion engine, and an engine control unit are provided for appropriately determining the amount of reducing agent supplied to a NOx selective reduction catalyst to ensure good exhaust gas characteristics. The exhaust gas purifying apparatus comprises an ECU; a NOx selective reduction catalyst for purifying NOx in exhaust gases in an exhaust pipe; a NOx sensor disposed in the exhaust pipe at a location downstream of the NOx selective reduction catalyst for detecting a NOx concentration in exhaust gases; and an injector for supplying the NOx selective reduction catalyst with ammonia produced in an ammonia production unit. The ECU determines the amount of ammonia injected to the NOx selective reduction catalyst by the injector such that an estimate of the NOx concentration detected by the NOx sensor reaches a minimum value.